WHAT IS CLAIMED IS:

1. A method for compensating timing to start data writing in a magnetic disk device having one or more magnetic heads, each magnetic head having a write head and a read head with a head gap distance therebetween, the method comprising:

measuring the head gap distance in each of the one or more magnetic heads by writing and reading a predetermined unique pattern; and

compensating the timing to start the data writing by changing the timing based on a time gap that corresponds to said measured head gap distance in each of the one or more magnetic heads.

2. The method of claim 1 wherein said unique pattern is a Sync pattern indicating the top of the data.

3. The method of claim 1, further comprising:

acquiring a time gap for compensating timing to start writing and reading for each track number; and

compensating the timing to start the data writing by changing it for each track number based on said time gap for each track number.

4. The method of claim 3 wherein said unique pattern is a Sync pattern indicating the top of the data.

5. In a magnetic disk device having a rotatable magnetic disk and a magnetic head, the magnetic head having separate write and read heads with a head gap distance therebetween, a method of establishing timing of write operations, the method comprising:

at a known first time interval after the read head detects a reference pattern on the magnetic disk, using the write head to write an identifiable predetermined pattern on the magnetic disk;

using the read head to detect the reference pattern and the predetermined pattern;

determining a second time interval between detecting the reference pattern and detecting the predetermined pattern;

determining information relating to the head gap difference based at least in part on the first and second time intervals; and

storing said information relating to the head gap difference for use in establishing the timing of subsequent write operations.

6. The method of claim 5 wherein the reference pattern is servo information on the magnetic disk.

7. The method of claim 5 wherein the predetermined pattern is a Sync pattern indicating the top of the data.

8. The method of claim 5 wherein said determining the second time interval comprises:

establishing a read window having a duration substantially equal to the duration of the predetermined pattern;

reading the magnetic disk during the window interval while preventing reading during time intervals before and after the window interval;

determining whether the predetermined pattern is within the window; and

if not,

moving the window.

repeating reading and determining until the predetermined pattern is found in the window, and

using the window position at which the predetermined pattern is found in the window to determine the second time interval.

9. Circuitry for use with a magnetic disk device having a magnetic head with a write head and a read head, the magnetic head being characterized by a head gap distance between the write head and the read head, the circuitry comprising:

measurement circuitry that measures the head gap distance by writing and reading a predetermined unique pattern with the magnetic head;

a memory that stores a time gap that corresponds to the head gap distance measured by said measuring means; and head gap compensation circuitry that compensates timing to start writing based on said time gap that is read out from said memory.

10. The circuitry of claim 9 wherein said unique pattern is a Sync pattern indicating the top of the data.

11. The circuitry of claim 9 wherein said head gap compensation circuitry further compensates said timing to start the writing for each track number.

12. The circuitry of claim 9 wherein:

said disk device has a plurality of magnetic heads, each characterized by a respective head gap distance, thereby defining a plurality of head gap distances;

said measurement circuitry measures the head gap distance for each of said plurality of magnetic heads by writing and reading respective predetermined unique patterns with said plurality of magnetic heads;

said memory stores a plurality of time gaps that corresponds to said plurality of head gap distances measured by said measurement circuitry; and

said head gap compensation circuitry compensates timing to start writing for each magnetic head based on the time gap for that head that is read out from said memory.

13. The circuitry of claim 12 wherein said unique pattern is a Sync pattern indicating the top of the data.

14. A magnetic disk device having a magnetic head with a write head and a read head, the magnetic head being characterized by a head gap distance between the write head and the read head, the magnetic disk device comprising:

measurement means for measuring the head gap distance by writing and reading a predetermined unique pattern with the magnetic head;

memory means for storing a time gap that corresponds to the head gap distance measured by said measuring means; and

head gap compensation means for compensating timing to start writing based on said time gap that is read out from said memory means.

15. A magnetic disk device comprising:

a magnetic disk;

a write head for writing data on said magnetic;

a write circuit for modulating the data and supplying a write current to said write head;

a read head for reading the data from said magnetic disk;

a read circuit for amplifying and demodulating a read signal provided by said read head;

a gate generating circuit for generating a read gate and a write gate that determine timing to write and read the data;

a pattern generating circuit for generating a pattern that is used for measuring a head gap distance;

a gap measuring circuit for measuring said head gap distance based on a signal acquired by writing and reading said pattern;

a memory for storing a time gap TG corresponding to said head gap distance, so measured; and

a gap compensating circuit, coupled to said memory, for compensating the timing of writing data based on said time gap TG stored in said memory.